

Work Order ID 61440

September 1, 2010 1:32:54 PM



Page 1

Item ID: D206-642-545

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube

Start Date: 8/25/10

Start Qty: 2.00



Cust Item ID:

Required Date: 9/01/10

Req'd Qty: 2.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3274

Rev D

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-545

CHG00

28 10/10/08

HJ for BG 10-10-05

BG1440

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D206-642-545 PAR #: _____ Fault Category: Stick tubes NCR: ☒ Yes No DQA: _____ Date: 8.10.22
 Resolution: Accepted Disposition: use as is QA: N/C Closed: ju Date: 10/10/22

NCR: <u>61440</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>14.05.22</u>	<u>110</u>	<u>BEND OF AFT END IS</u> <u>3.375"</u> <u>Process</u>	<u>CP</u> <u>10.05.22</u> <u>OS 1042</u>	<u>Acceptable</u> <u>Higher bend increases</u> <u>drag load and decreases</u> <u>over all bending moment</u>	<u>CP</u> <u>10.05.22</u> <u>10/10/22</u>	<u>10/10/22</u> <u>10/10/23</u>	<u>CP</u> <u>10.05.22</u> <u>OS 1042</u>	<u>8</u> <u>10/10/23</u>

NOTE: Date & initial all entries

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Item ID: D206-642-545

Accept

Revision ID:

Item Name: Skidtube

Start Date: 8/25/10

Start Qty: 2.00

Required Date: 9/01/10

Req'd Qty: 2.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

130

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control



DP 10-9-7

BE (S) 10/09/07

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Item ID: D206-642-545

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Setup Start



Revision ID:

Item Name: Skidtube

Stop



Start Date: 8/25/10 Start Qty: 2.00



Cust Item ID:

Required Date: 9/01/10 Req'd Qty: 2.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274

2-deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

3-Bond web in place as per Dwg D3274 & QSI 015.

A/R ☐ Sikaflex-291 ☒ 11/15/14 ☐

Sikaflex expire date: ☐ 11/01/30 ☐

Start: ☐ 10/09/08 ☐ Time: ☐ 11:00 ☐

Finish: ☐ 10/09/08 ☐ Time: ☐ 10:30 ☐

(Adhere for 12 hours)

□

150

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

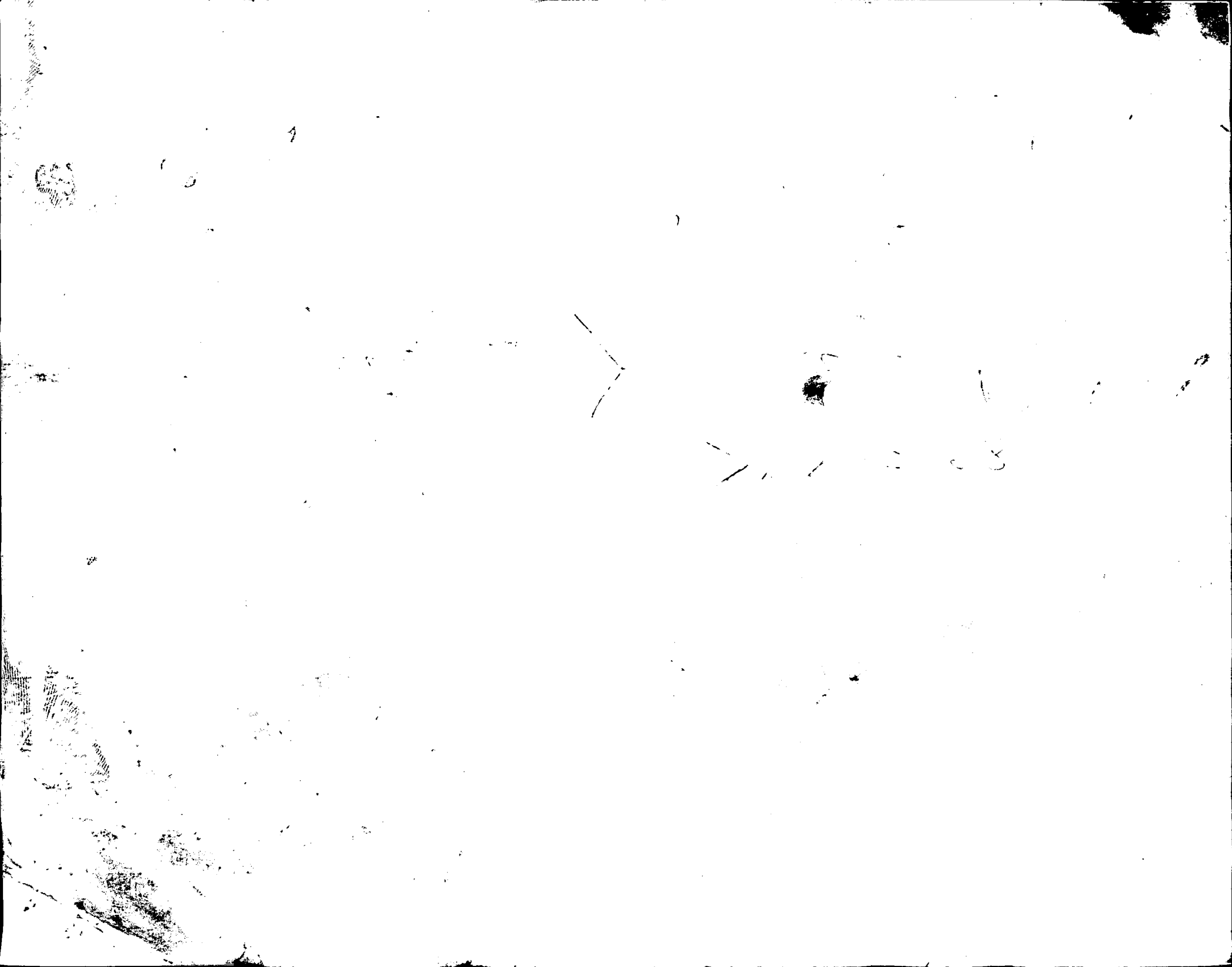
Quality Control

8/10/09/15

40

10-9-8

1 BB 10/09/08



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Item ID: D206-642-545

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Setup Start



Revision ID:

Stop



Item Name: Skidtube

Start Date: 8/25/10 Start Qty: 2.00



Cust Item ID:

Required Date: 9/01/10 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2
OPEN HOLES TO .297"

3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD
END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

6-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod
A/R □ □ Aluminum Rod □

7-Grind cross bolt welds flush as per Dwg D3274.

8-Counterbore 5/16" x 0.750" deep as per Dwg D3274. Use DT8743 visual aid Jig and deburr.

DP

10-9-15

BB 10-9-23

M112507 BE 10-9-27

3 BE 10/09/30

Work Order ID 61440

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Item ID: D206-642-545

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube

Start Date: 8/25/10 Start Qty: 2.00



Cust Item ID:

Required Date: 9/01/10 Req'd Qty: 2.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

170

0.00



Skidtubes

Skidtubes

Memo

0.00

~~1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod 1A/RAluminum Rod 12-Grind cross bolt welds flush as per Dwg D3274 13-Counter~~

Repeat.
Reave

180

0.00



QC10- Inspect visual per QSI004- ground welds

QC

Memo

0.00

Quality Control

S 10/01/29

190

0.00



QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

S 10/01/29

(X)

h2 2.900"
L° = 4.8°

Rto

Dart Aerospace Ltd

W/O: 61440		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
190.1 10/09/30	190.1	Pressure wash & Realign as per PAR-0413	gll	10/09/30	XL		S 10/10/04

Part No: D206-642-545 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Item ID: D206-642-545

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Start Date: 8/25/10 Start Qty: 2.00



Cust Item ID:

Required Date: 9/01/10 Req'd Qty: 2.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Handwritten initials

200

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

Handwritten: 10-9-30



Powdercoat

Memo

0.00

Handwritten: 1 0

Powder Coating

START TIME:

Handwritten: 1:35

OVEN TEMPERATURE:

FINISH TIME:

Handwritten: 2:05

210

QC3- Inspect Part Finish

0.00

Handwritten: => 10/10/01



QC

Memo

0.00

Handwritten: 1 0

Quality Control

220

HAND FINISHING RESOURCE #1

0.00

Handwritten: => 10/10/01



HandFinish

Memo

0.00

Handwritten: 1 0

Hand Finishing

✓ 1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.

[]

A/RN/ALPS-3 *Handwritten: 11109239* 2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes at A/RSikaflex-291

✓ *Handwritten: 11115114* Sikaflex expire date: *Handwritten: 11/01*

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Item ID: D206-642-545

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Setup Start

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Item Name: Skidtube

Start Date: 8/25/10 Start Qty: 2.00

Cust Item ID:

Required Date: 9/01/10 Req'd Qty: 2.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

230

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

Inspect Nut Plate & Inserts

240

HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

✓ 2-Install wearpads & gaskets as per Dwg D3274. □3-Install ring as per Dwg D3274 □A/RSikaflex-291 MIS 114 □Sikaflex expire date: 11/01 □4-Inspect for foreign objects as per QSI 024 □15-Spray inside of tube on both sides of web NA

250

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

Work Order ID 61440

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Item ID: D206-642-545

Accept

Setup Start

Revision ID:

Stop

Item Name: Skidtube

Start Date: 8/25/10 Start Qty: 2.00

Cust Item ID:

Required Date: 9/01/10 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:
QC: Date: SPC (Y/N): Date:

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260		0.00							
	Packaging								
Packaging	Memo	0.00							
Packaging	Packaging								
	<i>NeVA</i>								
270									
	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									

*10/10/12**10/10/12*
MS
10-10-12

Picklist Print

Page 1

Wednesday, August 25, 2010 10:31:13 AM

Work Order ID: 61440

Parent Item: D206-642-545

Parent Item Name: Skidtube



Start Date: 8/25/2010

Required Date: 9/1/2010

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A New Issue 06-10-06 JLM
 IPP Rev:B Added SS Wearplates & Gaskets 07-02-23 JLM
 IPP Rev:C ECN 1080p 07-12-06 DD verified by:
 IPP Rev:D as per PAR 08-015 08-04-17 DD verified by:ec
 IPP Rev:E 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2600-1-190

Manufactured

No

110

Each

74.0000

1

2



Extrusion Round 3" 206

Location

Loc Qty

Loc Code

LG

74

47575

26

59874

48

XL BB 10/09/01

D2646

Manufactured

No

120

Each

72.0000

1

2



Aft Cap

Location

Loc Qty

Loc Code

FP-4

63

57332

63

FP6

9

52663

9

XL

D3285-1

Manufactured

No

140

Each

144.0000

1

2



Cap

Location

Loc Qty

Loc Code

LG

144

52511

74

52647

70

1 SE 10/09/01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, August 25, 2010 10:31:13 AM

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Work Order ID: 61440

Parent Item: D206-642-545

Parent Item Name: Skidtube

Start Date: 8/25/2010

Required Date: 9/1/2010

Start Qty: 2.00

Required Qty: 2.00

D2649



Cross Bolt Spacer

Manufactured No

170

Each

29.0000

12

24



Location

Loc Qty

Loc Code

LG

29

58545

2

60652

27

B61496 24x12 BE 10/09/27

D3282-041



Float Web (206L/407)

Manufactured No

170

Each

2.0000

1

2



Location

Loc Qty

Loc Code

LG

2

59886

2

BB 10/09/08

CCR264SS3-3



Cherry Rivet

Purchased No

220

Each

472.0000

2

4



10/10/04

Location

Loc Qty

Loc Code

ST311

472

112314

4

113539

44

113973

424

x2

CR3212-4-03



Cherry Rivet

Purchased No

220

Each

1,912.000

2

4



10/10/04

Location

Loc Qty

Loc Code

ST311

1912

111359

5

112314

2

114436

448

114450

83

114859

1374

x2

Wednesday, August 25, 2010 10:31:13 AM

Shop Packet Print

Page 2

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Work Order ID: 61440

Parent Item: D206-642-545

Parent Item Name: Skidtube

Start Date: 8/25/2010

Required Date: 9/1/2010

Start Qty: 2.00

Required Qty: 2.00

D3275-1

Manufactured No

220

Each

48.0000

37

74



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG

48

53453

8

60653

40

D3415-041

Manufactured No

220

Each

58.0000

1

2



Nut Plate

Location

Loc Qty

Loc Code

ST056

58

33842

58

ALS7-1032-130

Purchased

No

240

Each

878.0000

78

156



Insert

Location

Loc Qty

Loc Code

FP

861

115079

861

ST282

17

113238

17

1114723

V78

B 61646 x34

3 BE 10/09/27

Al 10/10/04

X1

Al 10/10/04

Wednesday, August 25, 2010 10:31:13 AM

Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Page 4

Wednesday, August 25, 2010 10:31:13 AM

Work Order ID: 61440

Parent Item: D206-642-545

Parent Item Name: Skidtube

Start Date: 8/25/2010

Required Date: 9/1/2010

Start Qty: 2.00

Required Qty: 2.00

AN3C4A

Purchased

No

240

Each

1,831.000

80

160



BOLT



21 10/10/04

Location

Loc Qty

Loc Code

ST303

500

^

115438

500

ST350

1331

114108

14

114416

12

114523

2

114941

303

115300

1000

X80

AN4C5A

Purchased

No

240

Each

506.0000

1

2



BOLT



21 10/10/04

Location

Loc Qty

Loc Code

ST346

506

M115816

X1

110552

11

112243

495

AN960C10L

NAS1149C0332
R

Purchased

No

240

Each

179.0000

80

160



washer



21 10/10/04

Location

Loc Qty

Loc Code

ST245

179

107534

29

109545

78

111548

72

M115816

X80

Wednesday, August 25, 2010 10:31:13 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Wednesday, August 25, 2010 10:31:13 AM

Work Order ID: 61440

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Parent Item Name: Skidtube

Start Date: 8/25/2010

Required Date: 9/1/2010

Start Qty: 2.00

Required Qty: 2.00

AN960C416 NAS1149C0463 Purchased No

240 Each 107.0000 1 2



washer



10/10/04

Location

Loc Qty

Loc Code

ST346

107

100993

107

D3413-1 Manufactured No

240 Each 24.0000 1 2



Ring



10/10/04

Location

Loc Qty

Loc Code

ST473

24

51586

1

53446

23

D3535-15 Manufactured No

240 Each 20.0000 1 2



Wearshoe



10/10/04

Location

Loc Qty

Loc Code

FP18

20

59236

7

61241

13

D3535-23 Manufactured No

240 Each 7.0000 1 2



Wearshoe



10/10/04

Location

Loc Qty

Loc Code

FP21

7

60864

7

B61830

10/10/04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Parent Item Name: Skidtube

Start Date: 8/25/2010



Required Date: 9/1/2010

Start Qty: 2.00



Required Qty: 2.00

D3535-35	Manufactured	No	240	Each	9.0000	1	2
							<u>2</u>
Wearshoe							<u>2</u> 10/10/04



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP018	9	360865
60232	9	

D3535-39	Manufactured	No	240	Each	22.0000	1	2
							<u>2</u>
Wearshoe							<u>2</u> 10/10/04

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP18	22	
58214	5	
60233	17	

D3536-15	Manufactured	No	240	Each	22.0000	1	2
							<u>2</u>
Gasket							<u>2</u> 10/10/04

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	16	
56055	4	
60875	12	
FP11	6	
59238	6	

D3536-23	Manufactured	No	240	Each	10.0000	1	2
							<u>2</u>
Gasket							<u>2</u> 10/10/04

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP011	10	
60234	10	361237

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Work Order ID: 61440

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Parent Item Name: Skidtube

Start Date: 8/25/2010



Required Date: 9/1/2010

Start Qty: 2.00



Required Qty: 2.00

D3536-35 Manufactured No 240 Each 14.0000 1 2
  ML 10110100
 Gasket



Location	Loc Qty	Loc Code
FP012	14	B61692
58683	1	
60235	13	

D3536-39 Manufactured No 240 Each 18.0000 1 2
  ML 10110100
 Gasket

Location	Loc Qty	Loc Code
FP12	18	
58215	4	
58571	14	

D3537-1 Manufactured No 240 Each 32.0000 9 18
  ML 10110100
 Wearpad

Location	Loc Qty	Loc Code
FP	1	
55465	1	B61640
FP017	48	
FP17	31	
57713	3	
60192	3	
60491	25	

D3537-3 Manufactured No 240 Each 10.0000 1 2
  ML 10110100
 Wearpad

Location	Loc Qty	Loc Code
FP19	10	
59711	10	B60866

Wednesday, August 25, 2010 10:31:13 AM

Shop Packet Print

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 8

Wednesday, August 25, 2010 10:31:13 AM

Work Order ID: 61440



Parent Item: D206-642-545



Parent Item Name: Skidtube

Start Date: 8/25/2010

Required Date: 9/1/2010

Start Qty: 2.00

Required Qty: 2.00

D3672-1

Manufactured No

240

Each

947.0000

2

4



Handwritten signature

Phenolic Washer

Location

Loc Qty

Loc Code

ST077

947

42329

150

52505

797

22

Wednesday, August 25, 2010 10:31:13 AM

Shop Packet Print

Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

RELEASED

07.02.12

DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY SCALE NTS	
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

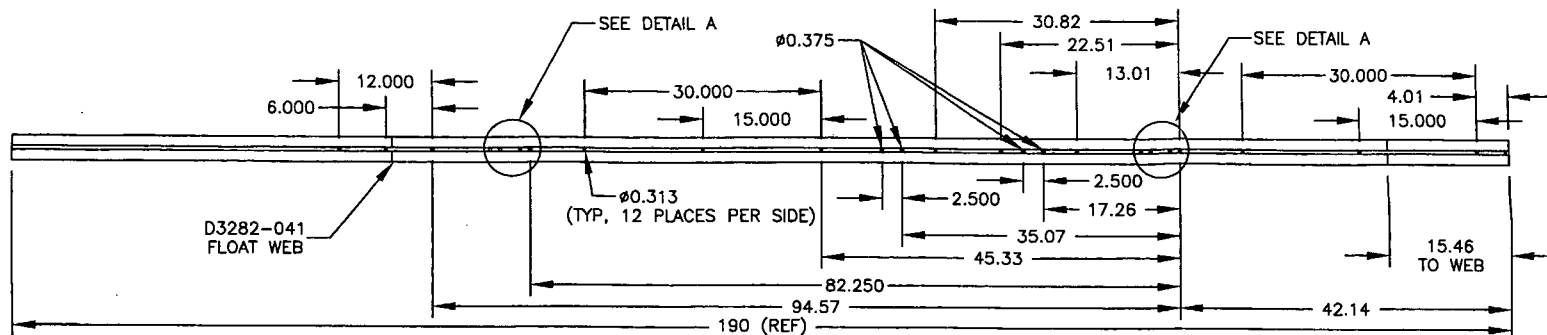
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

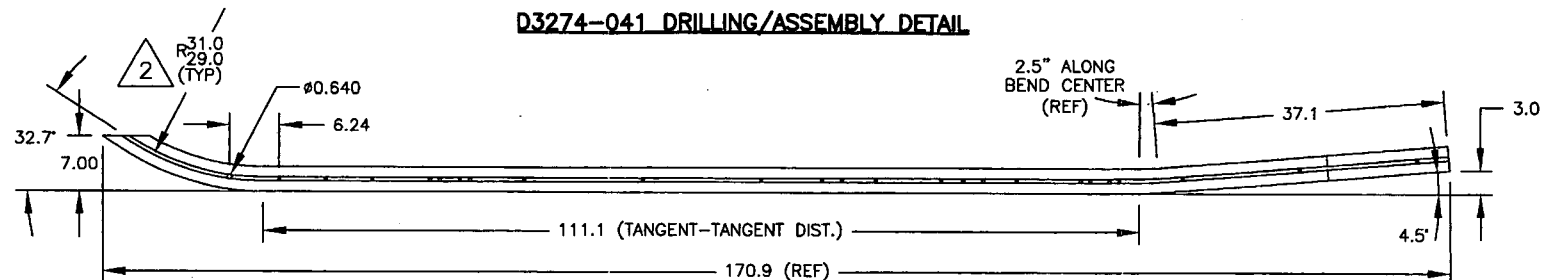
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

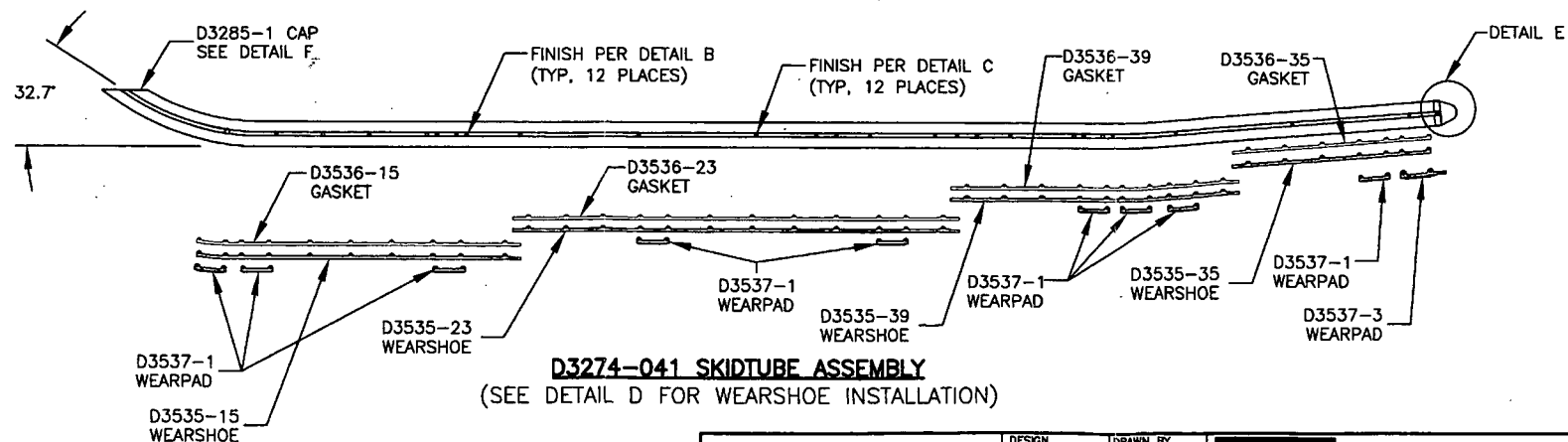
DEO ATTACHED



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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DESIGN	CP	DRAWN BY	PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, MA
CHECKED	#	APPROVED	#	DRAWING NO. D3274
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	REV. D SHEET 2 OF 4 SCALE 1:15

W/O 614410

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

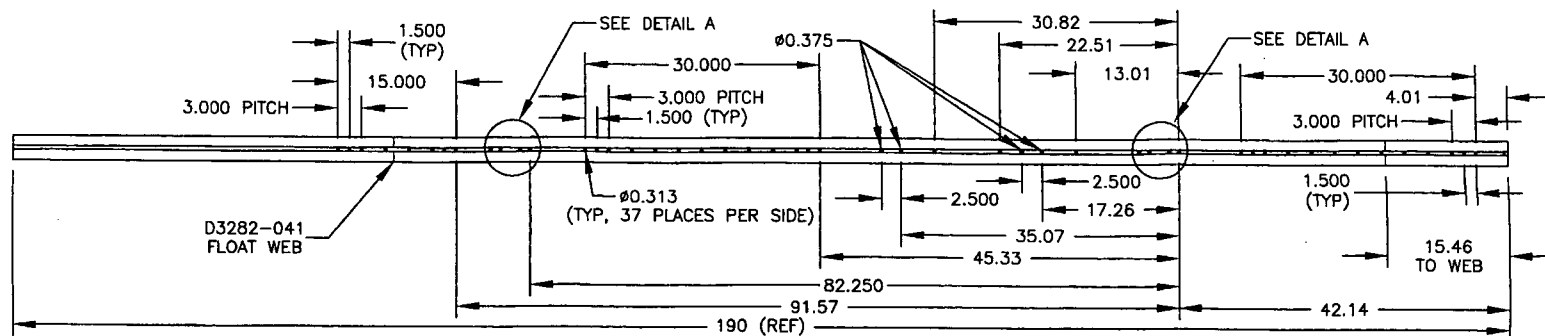
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

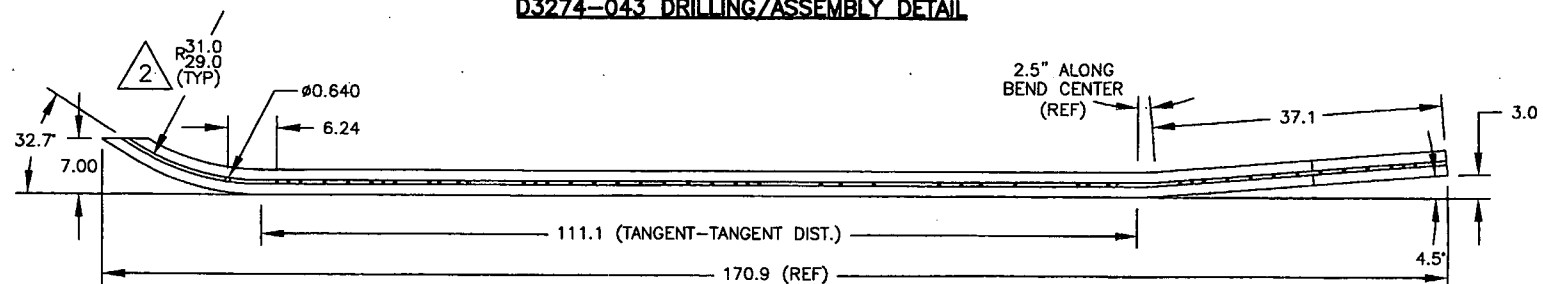
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

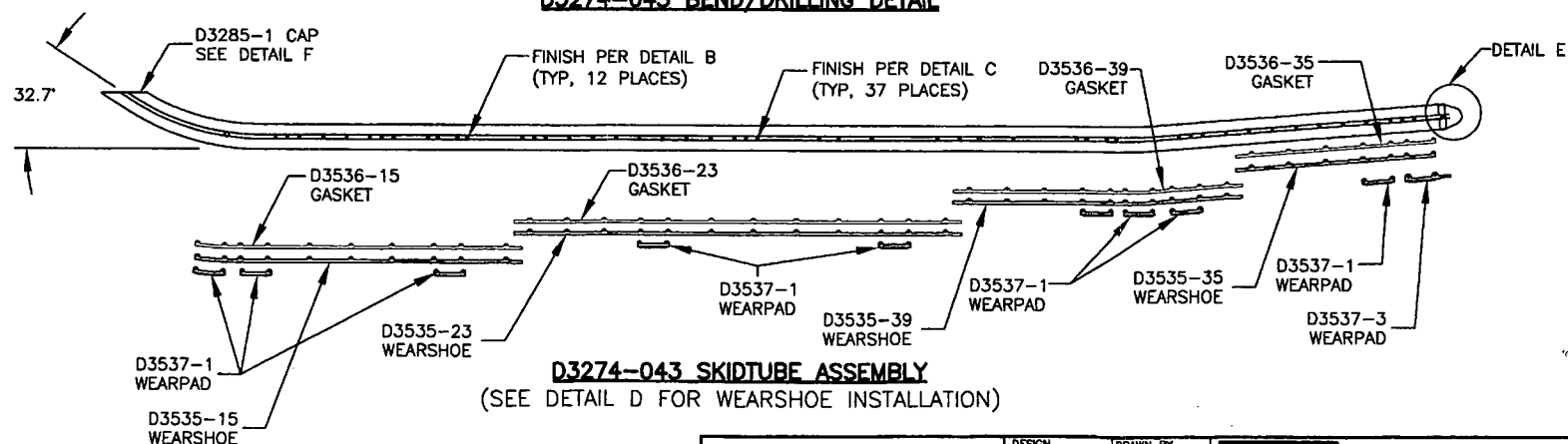
DEO ATTACHED



D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07-02-12

cel 61440

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CHECKED	CP	APPROVED	PH	DRAWING NO.	REV. D
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	SHEET 3 OF 4	SCALE
				1:15	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

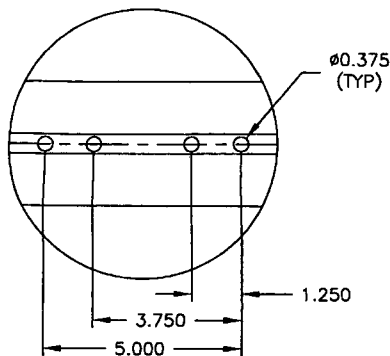
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

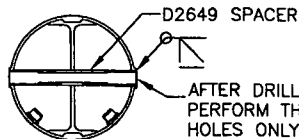
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DETAIL A: DRILL DETAIL

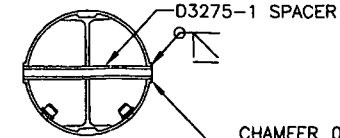


DETAIL B FOR 0.375 HOLES ONLY



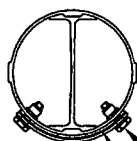
AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR 0.375
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
2. INSERT D2649 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE TO 0.313x0.75 DEEP

DETAIL C FOR 0.313 HOLES ONLY



CHAMFER 0.030x45°
(TYP)

DETAIL D

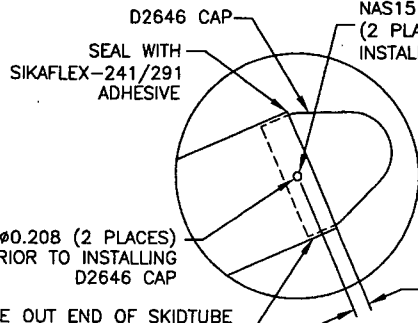


ALS7-1032-130 INSERT (1)
AN3C4A BOLT (1)
AN960C10L WASHER (1)
(78 PLACES)

GASKET/WEARSHOE/WEARPAD (REF)

DETAIL E

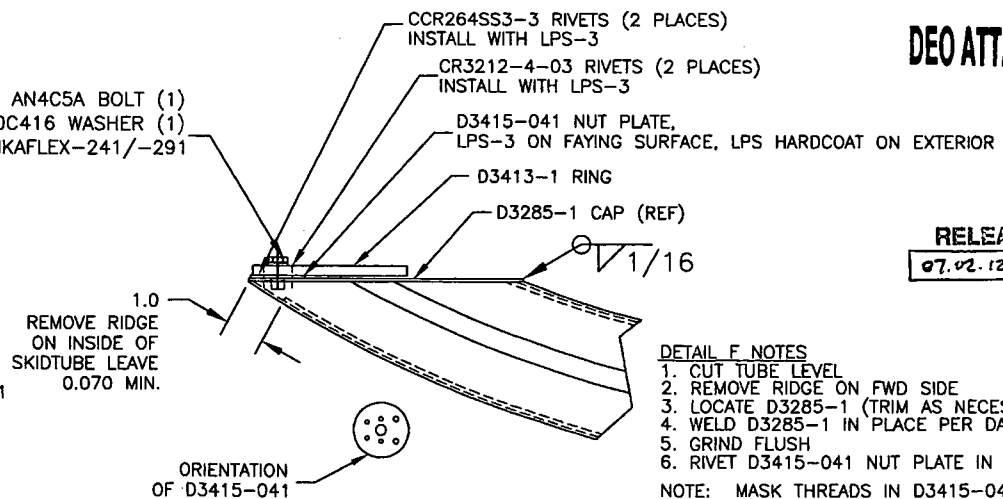
AN3C4A BOLT (1)
AN960C10L WASHER (1)
NAS1515H3L WASHER (1)
(2 PLACES)
INSTALL WITH SIKAFLEX-241/-291



SEAL WITH
SIKAFLEX-241/291
ADHESIVE

BORE OUT END OF SKIDTUBE
TO 0.75 DEPTH AND 0.070 WALL

DETAIL F: END FINISHING DETAIL



DETAIL F NOTES
1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE
NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

DEO ATTACHED

RELEASED
07.02.12

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DATE		06.12.19	APPROVED	TITLE SKIDTUBE ASSEMBLY	SCALE 1:3

wlo 6/14/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

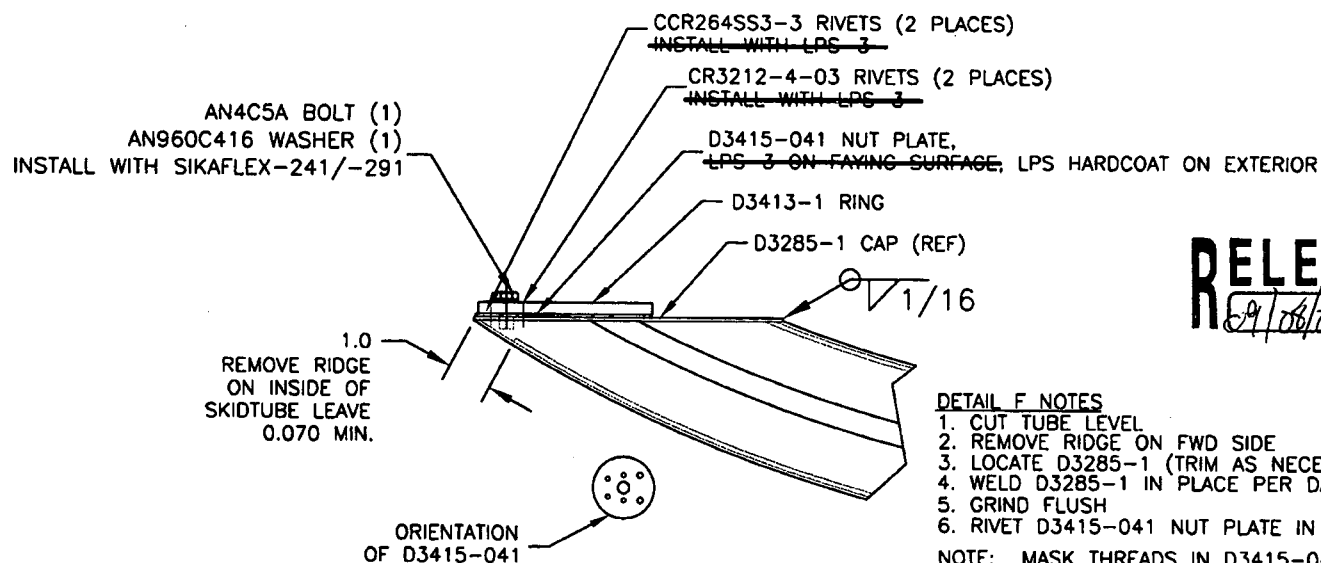
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>CP</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: ~~"SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS-3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



RELEASED
09/06/23

DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

WLO 61440

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 251

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Berclay Elliott
Job number: 61039
Part number: D206-442-441
Description: 206 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Del Del Date of Test Coupon 10.08.19

Welder Berclay Elliott Date of Test Coupon 10.08.19

The above named individual is qualified in accordance with AWS D17.1.2001 to weld